



SECTION 9

Deceased Donor Pancreas Donation

SUMMARY

This section summarises pancreas donation activity from deceased donors in 2020 compared with previous years. The rate of pancreas transplantation in 2020 was 1.8 pmp in Australia and 0.6 pmp in New Zealand.

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Executive Summary

Since its inception in 1989 in Australia and 1993 in New Zealand, the Australian and New Zealand Organ Donation Registry (ANZOD) continues to record and report on organ donation within Australia and New Zealand.

Data related to organ donation and transplantation activity is essential in identifying opportunities for improving the care of donors, informing on the quality of transplant organs and transplant recipient outcomes.

One organ donor can benefit a number of recipients suffering from end stage organ disease. One donor could donate up to 9 organs including, kidneys (left and right), liver (split left and right), heart, lungs (left and right), pancreas and intestine, improving the lives of people wait listed for an organ transplant.

Of importance for this reporting period was the emergence of COVID-19 that spread across the world, with the first reported case in Australia on 25th January 2020. Rapid evolution of the pandemic saw precautionary steps taken by the transplant sector which effected the organ donation programs in Australia and New Zealand. During the peak emergence of COVID-19 (late-March through to mid-May 2020) the COVID-19 National Transplantation and Donation Rapid Response Taskforce was established, comprised of members from the Transplantation Society of Australia and New Zealand (TSANZ) and Organ Tissue Authority (OTA). Recommendations from the Taskforce saw transplant programs for kidney, pancreas and islets transplants suspended and restrictions placed on liver, heart, lung, pediatric and multi-organ transplant programs to consider only recipients likely to die within four months if not transplanted. This was subject to case-by-case review of donor-recipient characteristics at a unit level. Limitations on movement of organs between states was also observed during this period due to challenges faced including border closures, flight restrictions and COVID-19 restrictions.

Consideration of the effect of the COVID-19 pandemic should be given when analysing the data included in this chapter.

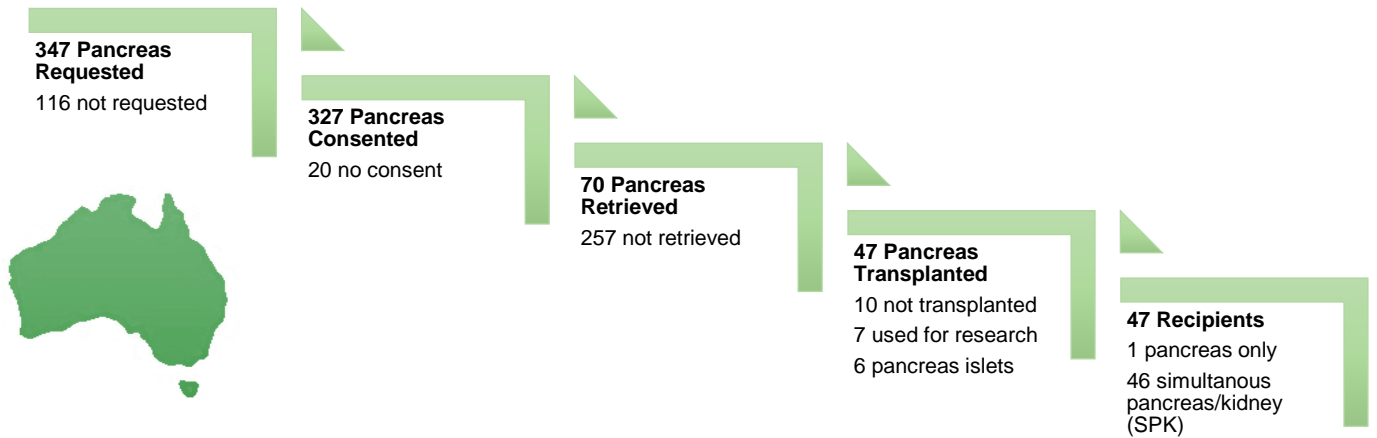
Suggested Citation

ANZOD Registry. 2021 Annual Report, Section 9: Deceased Donor Pancreas Donation. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2021. Available at: www.anzdata.org.au

Pancreas Donation

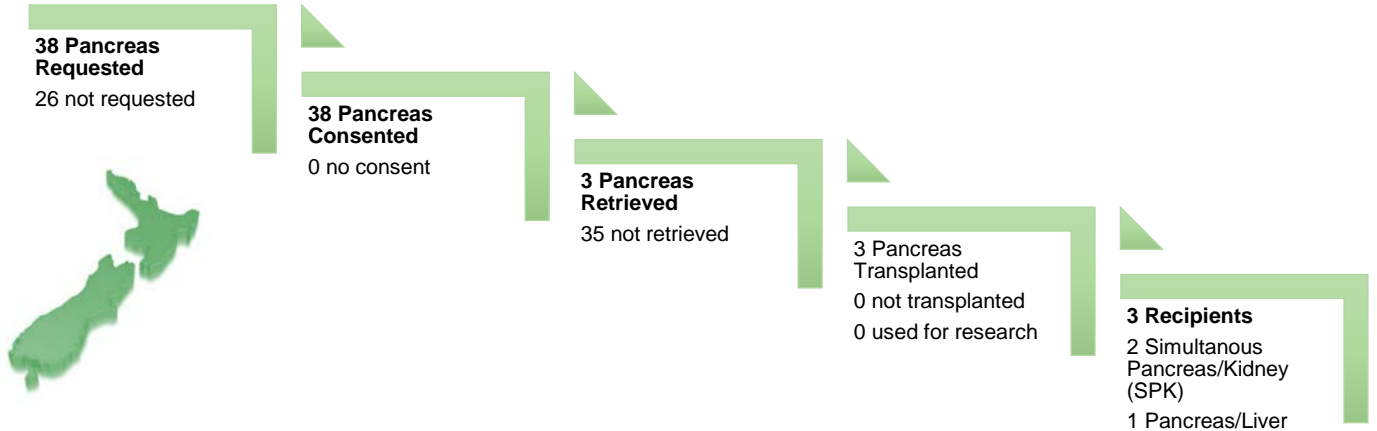
In Australia, there were 47 pancreas transplants in 2020. 46 pancreas were transplanted simultaneously with a kidney. There was a rate of 1.8 per million population (pmp) pancreas transplants in 2020. 6 pancreas retrieved were utilised for islet transplant. Figure 9.1.1 shows the outcomes of requests for pancreas donation in Australia for 2020.

Figure 9.1.1 Outcomes of Request for Pancreas Donation from Actual Donors in Australia 2020



In New Zealand, there were 3 pancreas transplants (0.6 pmp) in 2020. 2 transplants were a combined pancreas/kidney transplant and 1 combined pancreas/liver transplant.

Figure 9.1.2 Outcomes of Request for Pancreas Donation from Actual Donors in New Zealand 2019



Figures 9.2 and 9.3 show the number of pancreas recipients by donation pathway and transplant region.

Figure 9.2.1 – Recipients of Whole Pancreas Transplant by Donation Pathway, Australia 1998–2020

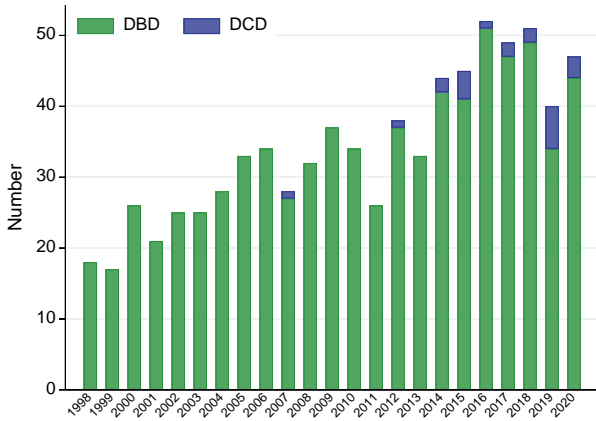


Figure 9.2.2 - Recipients of Whole Pancreas Transplant by Donation Pathway, New Zealand 1998–2020

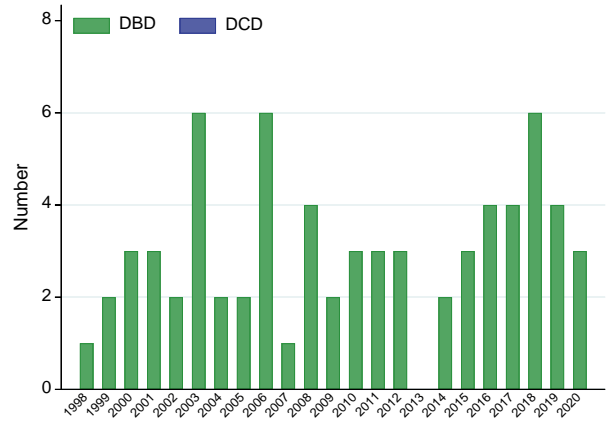
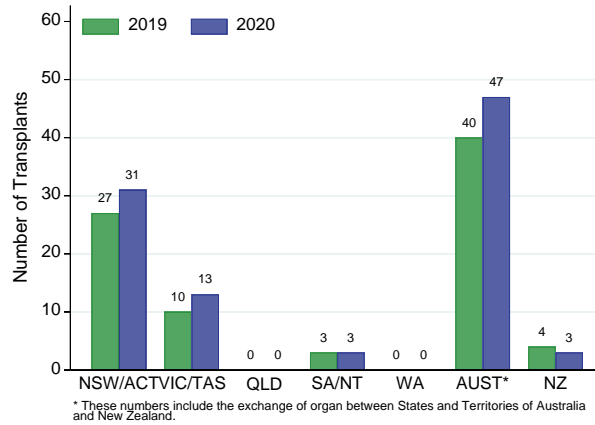


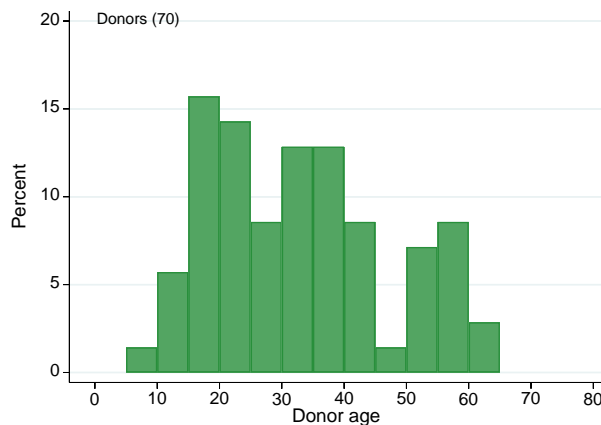
Figure 9.3 - Deceased Donor Pancreas Transplant Recipients* by Transplant Region, Australia and New Zealand, 2019–2020



Age of Pancreas Donors

The age distribution of donors providing retrieved pancreas for Australia, Figure 9.4.1. For New Zealand the age of donors for retrieved pancreas were all between 15-35 years.

Figure 9.4.1 - Age of Donors Providing Retrieved Pancreas Australia 2020



Donor Pancreas Function

Tests for pancreas function of deceased donors include blood sugar levels, serum amylase and serum lipase tests.

Australia

In Australia, of the 369 donors in 2020 with a measurement taken, 82.7% had blood sugar levels greater than 8mmol/L. Of those 70 donors with pancreas retrieved and a measurement taken, 82.9% had blood sugar levels greater than 8mmol/L.

Of the 273 donors with a measurement taken, 91.2% had normal amylase levels or lipase less than 80 U/L. Of the 64 donors with pancreas retrieved and a measurement taken, 98.4% had normal amylase levels or lipase less than 80 U/L.

New Zealand

In New Zealand, of the 3 donors in 2020 with pancreas retrieved, 33.3% had blood sugar levels greater than 8mmol/L and 100.0% had normal amylase levels or lipase less than 80 U/L.

Pancreas Not Retrieved

In 2020, there were 257 pancreases not retrieved from Australian donors and 35 not retrieved from New Zealand donors. The reasons why a pancreas was not retrieved for organ transplantation are presented in Table 9.1.

Table 9.1 Reasons for Pancreas Not Retrieved 2020

Reason	Australia	New Zealand
Logistics	15	0
Not Medically Suitable	67	8
Surgically Unsuitable	0	0
Trauma to Organ	0	0
No Suitable Recipients	79	4
Age of Donor	80	18
DCD Donor	16	5
Consent Withdrawn	0	0
Others	0	0
Total	257	35

Pancreas Retrieved and Not Utilised for Transplantation

Figure 9.5 shows the non-utilisation rate of retrieved pancreases. This includes the proportion of pancreases that were retrieved for the purpose of solid organ transplantation, but not ultimately transplanted into a recipient. This could be due to an absence of suitable recipients, or the pancreas being found to be medically or surgically unsuitable after retrieval.

Note: Organ donation for the purpose of research is excluded when calculating a specific organ's non-utilisation rate for transplantation.

Figure 9.5.1 - Non-utilisation Rate of Pancreas Retrieved for Organ Transplantation - Australia 2016–2020

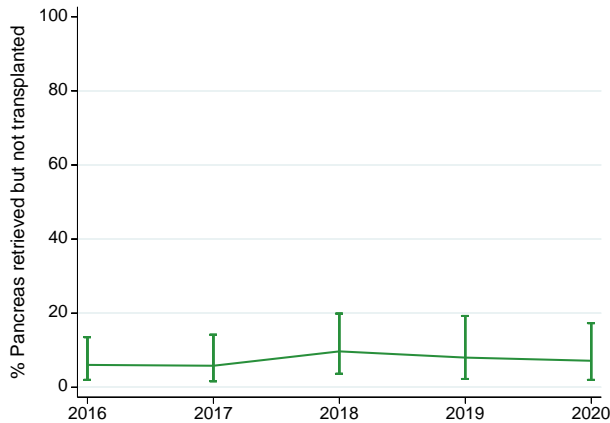


Figure 9.5.2 - Non-utilisation Rate of Pancreas Retrieved for Organ Transplantation - New Zealand 2016–2020

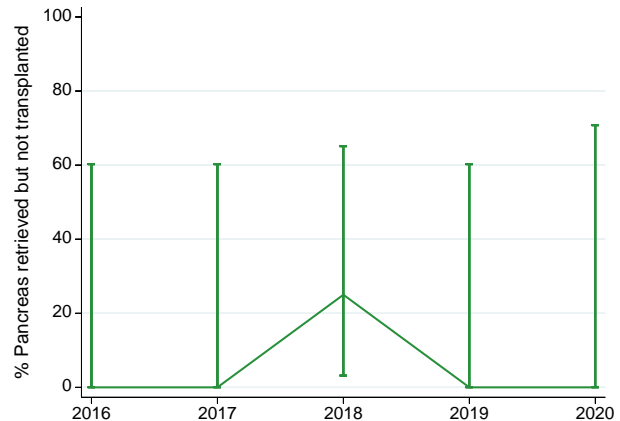


Table 9.2 tabulates the reasons pancreases were not used for transplantation after retrieval for that purpose in Australia and New Zealand since 2016.

Table 9.2 Reasons Pancreas Retrieved & Not Utilised for Transplantation, Australia (New Zealand) 2016–2020

Reason	2016	2017	2018	2019	2020
Logistics	1 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Not Medically Suitable	2 (0)	4 (0)	5 (1)	4 (0)	2 (0)
Not Surgically Suitable	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)
Trauma to Organ	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)
No Suitable Recipients	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Recipient Issue	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)
Insufficient Islets	7 (0)	9 (0)	10 (0)	4 (0)	6 (0)
Others	1 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Total	12 (0)	13 (0)	16 (2)	8 (0)	10 (0)

Outcome of Pancreas Donation

The outcome of pancreas donation activity in Australia and New Zealand through the donation pathway is shown in table 9.3.

Table 9.3.1 Outcome of Request for Pancreas Donation in Australia, 2016–2020

Outcome of Request	2016	2017	2018	2019	2020
Total Donors	503	510	554	548	463
Pancreas Requested for Donation	406	407	443	407	347
Pancreas Not Requested for Donation	97	103	111	141	116
Pancreas with Consent Given	394	393	416	391	327
Pancreas with Consent Not Given	12	14	27	16	20
Pancreas Retrieved	120	95	96	82	70
Pancreas Not Retrieved	274	298	320	309	257
Whole Pancreas Transplanted	52	49	51	40	47
Pancreas Only Transplanted	5	1	3	2	1
Pancreas Transplanted with Other Organ	47	48	48	38	46
Pancreas Islets Transplanted	8	11	14	16	6
Pancreas Not Used	12	13	16	8	10
Pancreas Retrieved for Research and Not for Transplantation	48	22	15	18	7
Whole Pancreas Recipients	52	49	51	40	47
Pancreas Only Recipients	5	1	3	2	1
Pancreas with Other Organ Recipients	47	48	48	38	46
Pancreas Islets Recipients	8	11	14	16	6
Pancreas (including Islets) Non-utilisation Rate	10.0%	13.7%	16.7%	9.8%	14.3%
Pancreas (Whole, no Islets) Utilisation Rate	43.3%	51.6%	53.1%	48.8%	67.1%

Table 9.3.2 Outcome of Request for Pancreas Donation in New Zealand, 2016–2020

Outcome of Request	2016	2017	2018	2019	2020
Total Donors	61	73	62	74	64
Pancreas Requested for Donation	45	40	44	42	38
Pancreas Not Requested for Donation	16	33	18	32	26
Pancreas with Consent Given	45	40	43	42	38
Pancreas with Consent Not Given	0	0	1	0	0
Pancreas Retrieved	4	4	8	4	3
Pancreas Not Retrieved	41	36	35	38	35
Whole Pancreas Transplanted	4	4	6	4	3
Pancreas Only Transplanted	0	0	0	0	0
Pancreas Transplanted with Other Organ	4	4	6	4	3
Pancreas Islets Transplanted	0	0	0	0	0
Pancreas Not Used	0	0	2	0	0
Pancreas Retrieved for Research and Not for Transplantation	0	0	0	0	0
Whole Pancreas Recipients	4	4	6	4	3
Pancreas Only Recipients	0	0	0	0	0
Pancreas with Other Organ Recipients	4	4	6	4	3
Pancreas Islets Recipients	0	0	0	0	0
Pancreas (including Islets) Non-utilisation Rate	0.0%	0.0%	25.0%	0.0%	0.0%
Pancreas (Whole, no Islets) Utilisation Rate	100.0%	100.0%	75.0%	100.0%	100.0%